UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

CARDIOVENTION, INC.,
a Delaware Corporation,

Plaintiff,

v. **MEMORANDUM OF LAW & ORDER**
Civil File No. 04-2669(MJD/AJB)

MEDTRONIC, INC.,
a Minnesota Corporation,

Defendant.

Joseph W. Anthony, Richard T. Ostlund, Norman J. Baer, Courtland C. Merrill, Anthony, Ostlund & Baer, P.A., Counsel for Plaintiff.

William Z. Pentelovitch, Mary R. Vasaly, Alain M. Baudry, Emily M. Rome, Maslon, Edelman, Borman & Brand L.L.P., Counsel for Defendant.

I. INTRODUCTION

This matter is before the Court on Defendant Medtronic, Inc.'s, Motion for Partial Summary Judgment. [Docket No. 167] The Court heard oral argument on January 30, 2006.

II. FACTUAL BACKGROUND

A. CardioVention, Inc. and the CORx Invention

In 1997, Plaintiff CardioVention, Inc., a Delaware corporation with its

principal place of business in California, was formed by investors for the purpose of designing and manufacturing cardiopulmonary bypass (CPB) systems. During cardiac surgery, the heart and lungs are arrested and the functions of these organs are performed by the CPB system, allowing the surgeon to work in a clear, motionless and bloodless field. The machine receives blood returning to the heart from the body, provides the blood with oxygen while removing carbon dioxide, and pumps the blood back into the body. The traditional CPB system employs a large surface area that needs to be primed with solution and uses an open venous reservoir, exposing the blood to air and siliconized antifoam. This system is problematic because the large surface area creates extensive contact between the patient's blood and a foreign surface, increasing the risk of a systemic inflammatory response, while the primer dilutes the blood, diminishing its oxygen carrying capacity. (Exh. 21 at 4-5 of Baer Decl.)

CardioVention approached Medtronic, a Minnesota corporation in the business of designing and manufacturing CPB systems, for the purpose of securing additional financing for the development of a smaller and improved CPB system. On March 1, 1999, the two companies signed a Confidential Disclosure Agreement, pursuant to which CardioVention gave Medtronic confidential information to evaluate a potential business relationship. (Exh. 33 to Baer Decl.) However, no formal business relationship developed.

In February 2001, CardioVention filed a patent application for its "CORx" CPB system. The CORx integrated the CPB functions into a smaller compact unit, which replaced the open venous reservoir with an "active" air removal system. The active air removal system detected air in the venous blood entering the CORx, and removed it through a solenoid valve connected to a vacuum line. (Brian Decl. ¶ 7.)

After the CORx was developed and patented, CardioVention and Medtronic resumed discussions concerning a formal business relationship. In June 2001, Medtronic employees attended a two-day presentation on CardioVention's CORx system and Medtronic sent a team to conduct due diligence at CardioVention's headquarters. At the conclusion of its due diligence procedures, Medtronic proposed a $10 million dollar investment, which CardioVention ultimately turned down.

B. The Gremel Patents

1. Gremel I & II

In May 1998, two engineers in Medtronic's cardiopulmonary research and development group, Roger Elgas and Robert Gremel, submitted a corporate invention form, disclosing a CPB system with an automatic air removal feature. (Exhs. 42-43 to Rome Aff.) Medtronic filed a patent application with the U.S. Patent and Trade Office ("PTO") for this invention on February 17, 1999. In the

application, Medtronic claimed that the device improved the air removal capabilities of the traditional CPB machine by inventing a venous filter that automatically removed air from the patient's blood using an air sensor. (Id.) The Patent Examiner initially rejected the Gremel patent as obvious in light of three patents: Steg, Jr. '331, Straus '553, and Shettigar '611. However, Medtronic distinguished the Gremel invention based on certain patentable features of the Gremel invention: 1) a venous return line under negative pressure; 2) a negative pressure air filter; 3) a venous return line connected directly to an air filter; and a vacuum turned on and off to evacuate air from the filter. (Exh. 45 to Baer Decl. at CV000264; Exh. 46 to Baer Decl. at CV000283.) The Patent Examiner allowed the patent ("Gremel I") to issue as U.S. Patent No. 6,302,860 on October 15, 2001.

Earlier, on September 18, 2001, Medtronic filed a continuation to the still pending Gremel I application ("Gremel II"). The Gremel II patent application added method claims to the device claims of Gremel I. Gremel II was issued as U.S. Patent No. 6,524,267 on February 25, 2003.

2. Venous Pull Circuit

In early 1996, several perfusionists at the Miami Children's Hospital in Florida began developing a smaller CPB system in order to overcome problems with the traditional CPB. A prototype of the CPB system developed by the

perfusionists, called the Venous Pull Circuit, was first used publicly in June 1997. (Ojito Decl. ¶ 4.) The Venous Pull Circuit replaced the open air reservoir with a closed system that used an air filter operating under negative pressure. (Id.) The system contained a sensor that detected air and trapped it in a filter connected to a pump, which the perfusionist then manually suctioned out of the filter, using the pump. (Id. at ¶ 8.) Dr. Jorge Ojito, the Chief Perfusionist at Miami Children's Hospital and a creator of the Venous Pull Circuit, provided Medtronic with the machine's system specifications in 1997, so that Medtronic could supply the hospital with its component parts. (Id. ¶ 12.) Several Medtronic technical and marketing employees, including Roger Elgas, visited Miami Children's to see the Venous Pull Circuit between 1997 and 1998. (Id. ¶ 14; Exh. 9 to Ojito Decl.) In 1998 and 1999, Medtronic paid Dr. Ojito to give industry-wide presentations about the system on several occasions. (Id. ¶¶ 15-17; Exhs. 10-12 to Ojito Decl.)

3. Tamari Invention

Biomedical engineer Yehuda Tamari conceived of a CPB system for actively removing air from venous blood in 1994. (Exh. 16 to Baer Decl. at 45.) Tamari filed a patent application in August 28, 1998, claiming an invention that replaced the traditional open venous reservoir with a closed reservoir. Like the Venous Pull Circuit, the Tamari invention trapped air in a filter and suctioned the air out using a sensor-controlled pump. The Tamari patent application was granted by the PTO

on January 8, 2002.

In May 2001, Medtronic's patent agent and legal department received a search report from the European Patent Office in response to the company's filing of a European counterpart application for the Gremel patent. The report identified the Tamari patent as prior art and rejected the application as anticipated by the Tamari invention. (Exh. 11 to Baer Aff. at 25-26; Exh. 50 to Baer Aff; Exh. 51 to Baer Decl. at CV00611.) At that time, the Gremel I patent application was pending yet Medtronic did not reveal this report to the Patent Examiner until June 2004.

4. Gremel III

In December 2002, Medtronic filed its Gremel III application, another continuation based on Gremel I. Gremel III specifies that the device vacuum would be automatically supplied in response to the sensor. However, in November 2003, the Patent Examiner discovered the Tamari prior art and rejected Medtronic's application as anticipated by Tamari and obvious when combined with other prior art. Medtronic responded by distinguishing the Tamari patent based on the term "air sensor." (Exh. 59 of Baer Decl. at MCS000010.) Medtronic claimed that the air sensor as used in the Gremel applications referred to an "ultrasonic bubble sensor," capable of detecting microbubbles entrained in blood.

Medtronic identified the Venous Pull Circuit and the Tamari patent in an Information Disclosure Statement in June 2004. (Exh. 65 to Baer Decl.) Medtronic explained to the Patent Examiner that the omission was due to an error in its docketing system. Exh. 63 of Baer Decl. at MCS004085. On November 4, 2004, the Patent Examiner allowed the Gremel III patent to issue.

C. Round D Investment

In late 2002, CardioVention began attempting to raise an additional $30 million through the issuance of Series D shares. In January 2003, CardioVention learned of the Gremel I patent after Medtronic appeared at a trade show promoting the Mini CPB device. At the trade show, Medtronic stated the Gremel I patent covered the active air removal feature of the device. CardioVention then performed a patent search and found the Gremel I patent.

The Series D potential investors independently discovered the existence of Gremel patents in February 2003 during the legal due diligence phase. (See Exh. 80 of Baer Decl.; Exh. 6 of Rome Aff. at 39:1-11; Exh. 10 of Rome Aff. at 7-9.) Deciding that the investment was too risky, the potential Series D investors withdrew their offer of investment. (Exh. 80 of Baer Decl; Exh. 6 of Rome Aff. at 69-70.) The potential investors cited the existence of intellectual property issues as the main reason for the withdrawal. (Exh. 80 of Baer Decl.; Campe Dep. at 40, 145; Ferrari Dep. at 37-39.) CardioVention anticipated an investment of $30

million from the lead Round D investor, Investors Growth Capital.

D. Potential Acquisition of CardioVention

After the withdrawal of the Round D investors, CardioVention hired investment banker Piper Jaffray to sell the company. Piper Jaffray found two companies that were potentially interested in purchasing CardioVention: Datascope and Medtronic. On June 13, 2003, Datascope offered to purchase CardioVention for $40 million.

In May 2003, Piper Jaffray arranged a meeting with Medtronic. Medtronic offered to purchase CardioVention for $25 to $32 million, informing Piper Jaffray's Jeffrey Hoffman that the low bid was due to Medtronic's intellectual property estate. (Exh. 10:2-10 of Baer Decl.) Medtronic's Director of Corporate Development, Jeffrey Erb, expressed to Hoffman that he did not understand how CardioVention could sell the company to anyone else, considering Medtronic's intellectual property holdings. (Exh. 17 to Rome Aff. at 80:9-12.)

After CardioVention proposed a counteroffer, Medtronic withdrew its offer. In July 2003, CardioVention CEO Thomas Afzal called Erb to discuss Medtronic's decision to withdraw its offer. According to Afzal, Erb believed that the CORx infringed on the Gremel patents, that Medtronic was considering sending a notice of infringement letter, and that if any other company acquired CardioVention,

Medtronic would enforce its patents unless the acquirer took a license entitling Medtronic to a 14% royalty. (Afzal Decl. at 2.)

During the due diligence phase, Datascope's attorneys discovered the Gremel patents. In August 2003, Datascope decided not to purchase CardioVention. (Exh. 71, 74 to Baer Decl.) In addition to its concerns about intellectual property issues, Datascope expressed apprehension about the proposed acquisition due to the fact that CardioVention had terminated the employment of key people in the company and notified its customers that it would no longer provide product support for the CORx. (Exh. 13 of Rome Aff. at 16:25-18:7; Exhs. 71, 72 to Baer Decl.)

In September 2003, CardioVention met with Medtronic to request a transferable covenant not to sue for any alleged patent infringement. Medtronic declined to offer a transferable covenant not to sue. CardioVention subsequently shut down all operations and pulled CORx from the marketplace.

E. Commencement of Litigation

On May 12, 2004, CardioVention filed a complaint against Medtronic, alleging: (1) breach of contract; (2) misappropriation of trade secrets; (3) unfair competition; (4) intentional interference with prospective economic advantage; and (5) negligent interference with business relations. CardioVention also sought a declaration that Medtronic's Gremel I and II patents were invalid and/or

unenforceable. Subsequently, CardioVention withdrew its claim of negligent interference with business relations.

This matter is before the Court on Defendant's motion for partial summary judgment as to Plaintiff's intentional interference with prospective economic advantage claim.

III. DISCUSSION

A. Summary Judgment Standard

Summary judgment is appropriate if, viewing all facts in the light most favorable to the non-moving party, there is no genuine issue as to any material fact, and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986). The party seeking summary judgment bears the burden of showing that there is no disputed issue of material fact. Celotex, 477 U.S. at 323. Summary judgment is only appropriate when "there is no dispute of fact and where there exists only one conclusion." Crawford v. Runyon, 37 F.3d 1338, 1341 (8th Cir. 1994) (citation omitted).

B. Tortious Interference with Prospective Business Advantage

CardioVention alleges in Count III of its complaint that Medtronic interfered with it prospective business advantage when it enforced its Gremel patents, causing potential investors in CardioVention to retract offers of investment and a potential purchaser to withdraw an offer to purchase CardioVention. Medtronic

moves for summary judgment as to this claim.

Both Minnesota and California law recognize a cause of action for tortious interference with prospective business advantage based on the Restatement (Second) of Torts § 766B. The parties do not address which law should apply in this case; however, because both states follow the Restatement, the outcome is the same regardless of which state's law is applied. See, e.g., Quelimane Co., Inc. v. Stewart Title Guar. Co., 960 P.2d 513, 530 (Cal. 1998); United Wild Rice, Inc. v. Nelson, 313 N.W. 2d 628, 632 (Minn. 1982). Section 766B provides: "One who intentionally and improperly interferes with another's prospective contractual relations . . . is subject to liability to the other for the pecuniary harm resulting from the loss of the benefits of the relations." In an action for tortious interference with prospective business advantage, the plaintiff must prove

1) the existence of a reasonable expectation of economic advantage or benefit belonging to Plaintiff;
2) that Defendants had knowledge of that expectation of economic advantage;
3) that Defendants wrongfully and without justification interfered with Plaintiffs' reasonable expectation of economic advantage or benefit;
4) that in the absence of the wrongful act of Defendants, it is reasonably probable that Plaintiff would have realized his economic advantage or benefit; and
5) that Plaintiff sustained damages as a result of this activity.

Harbor Broad., Inc. v. Boundary Waters Broadcasters, Inc., 636 N.W.2d 560, 569 (Minn. Ct. App. 2001) (citation omitted); See also United Wild Rice, 313 N.W.2d

628, 632-33 (citing Restatement (Second) of Torts § 766B).

1. Whether CardioVention's Claim Is Preempted by Federal Patent Law

The United States Constitution grants Congress the power to "promote the progress of science and the useful arts by securing for a limited time" the rights of inventors. U.S. Const. art. I, § 8, cl. 8. Under this authority, Congress passed the federal Patent Act, 35 U.S.C. §§ 1-376 (2000). Pursuant to the Supremacy Clause, U.S. Const., art. VI, cl. 2, federal law potentially preempts state law by three methods: explicit preemption, field preemption, and conflict preemption. Hunter Douglas v. Harmonic Design, Inc., 153 F.3d 1318, 1333 (Fed. Cir. 1998), overruled on other grounds by Midwest Indus., Inc. v. Karavan Trailers, Inc., 175 F.3d 1356 (Fed.Cir. 1999); See generally English v. Gen. Elec. Co., 496 U.S. 72, 78-79 (1990).

The preemption analysis is fundamentally a question of congressional intent. Explicit preemption exists where a statute explicitly provides for preemption of state law, while field preemption applies where Congress has enacted a "scheme of federal regulation . . . so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it." Hunter Douglas, 153 F.3d at 1333 (citation omitted). Finally, conflict preemption exists

to the extent that a federal and state law conflict, where compliance with both federal and state regulations is an impossibility or where the state law stands "as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress" in executing a statute. Dow Chem. Co. v. Exxon Corp., 139 F.3d 1470, 1473 (Fed. Cir. 1998) (citing Hines v. Davidowitz, 312 U.S. 52, 67 (1941)).

Clearly federal patent law does not provide for explicit preemption. Hunter Douglas, 153 F.3d at 1332 (citing 35 U.S.C. §§ 1-376). It is also evident that federal patent law and state unfair competition claims occupy different fields, and thus field preemption does not apply in this case. Hunter Douglas, 153 F.3d at 1333.

In determining whether the state law claim is in conflict with federal patent law, the Court takes an "as-applied" approach, focusing on the conduct that forms the basis for the tort law claim. The Court must assess whether the tort action is based on conduct that is protected or governed by federal patent law. If the conduct at issue is protected or governed by federal patent law, the tort action is preempted. Hunter Douglas, 153 F.3d at 1335. Thus, a tortious interference claim is preempted by federal patent law if it is based on the same conduct that is governed by patent law.

The Court notes that Federal Circuit law governs whether federal patent

law preempts a state law claim and finds that CardioVention's claim is preempted by federal law because it is based on conduct that is governed by federal patent law. Ultra-Precision Mfg., Ltd. v. Ford Motor Co., 411 F.3d 1369, 1376 (Fed. Cir. 2005) (citing Midwest Indus., Inc., 175 F.3d at 1361). Unlike the situation in Dow Chemical, in which the Federal Circuit held that two state law claims for tortious interference with prospective business advantage were not preempted because they sought to regulate marketplace conduct, CardioVention's claim seeks to regulate only conduct before the PTO. Dow Chem., 139 F.3d 1476-77. The Federal Circuit's analysis of the relationship between the federal patent law and the tort of intentional interference with prospective economic advantage has emphasized that the tort avoids conflict with patent law objectives because it remedies marketplace misconduct, rather than misconduct before the PTO and thus does not intrude upon the regulatory procedures of the PTO. Hunter Douglas, 153 F.3d at 1334; Zenith Elec. Corp. v. Exzec, Inc., 183 F.3d 1340, 1351 (Fed. Cir. 1999); Dow Chem., 139 F.3d at 1477. In this case, CardioVention's claim, as pled, is an attempt to remedy conduct before the PTO, rather than marketplace misconduct. As Medtronic has not attempted to enforce its patents against CardioVention or its prospective business relations, there is no marketplace conduct subject to remedy in tort.

In addition, the Federal Circuit has determined that there are two types of

conduct that federal patent law immunizes from state tort liability. In Abbott Laboratories v. Brennan, the court held that a state tort action based on a patentholder's conduct before the PTO is barred "at least unless it is shown that the entire federal agency action was a 'sham.' " Abbott Labs. v. Brennan, 952 F.2d 1346, 1356 (Fed. Cir. 1991). Federal patent law also bars a state tort action based on publicizing a patent in the marketplace unless the plaintiff can show that the patentholder acted in bad faith. Hunter Douglas, 153 F.3d at 1336.

In this case, CardioVention has not alleged that Medtronic's conduct amounted to fraud or rendered the patent application process a sham, and the Court finds no evidence to support such a claim. However, CardioVention argues that Medtronic publicized its patents in bad faith. CardioVention asserts that evidence of inequitable conduct before the PTO constitutes proof of Medtronic's subsequent bad faith enforcement of the Gremel patents in the marketplace, by which Medtronic is liable for tortious interference. Dow Chem., 139 F.3d at 1477.

Although proof of inequitable conduct before the PTO may show that a defendant has engaged in bad faith enforcement of its patent in the marketplace, to establish a tortious interference with prospective business advantage claim the plaintiff must prove bad faith misconduct in the martketplace. Id. CardioVention has presented no evidence that Medtronic ever attempted to enforce the Gremel

patents against its prospective business partners. Medtronic did not threaten or communicate with any of the potential Series D investors or with any potential purchasers of the company. The potential Series D investors independently discovered the existence of the Gremel patents.

CardioVention alleges that Medtronic threatened to enforce the Gremel patents during the period when CardioVention sought to consummate a sale of the company to Datascope. However, the record establishes that these threats were not communicated to Datascope and played no part in its decision to withdraw its offer to acquire CardioVention. Erb's alleged statements to Piper Jaffray's Jeffrey Hoffman, that he did not understand how CardioVention could sell the company to anyone else considering Medtronic's intellectual property holdings, were not communicated to Datascope and thus did not constitute an interfering act that caused harm to CardioVention. The same is true of the alleged conversation between Erb and CardioVention CEO Thomas Afzal—the statements were never communicated to Datascope and did not cause Datascope to withdraw its offer to purchase CardioVention.

The absence of any interfering acts or communications distinguishes this case from situations where courts have found proof of market misconduct directed at third parties involved in contracts or negotiations with the plaintiff. See, e.g., Golan v. Pingel Enter. Inc., 310 F.3d 1360, 1363-64 (Fed. Cir. 2002)

(cease and desist letter sent to plaintiff and twenty-two distributors); Zenith Elec., 182 F.3d at 1343 (statements by defendant to plaintiff's customers that plaintiff's system infringed defendant's patents); Mikohn Gaming Corp. v. Acres Gaming, Inc., 165 F.3d 891, 893-94 (Fed. Cir. 1998) (letters and press releases sent to plaintiff's customers asserting plaintiff infringed defendant's patent).

Absent evidence of marketplace misconduct, CardioVention's claim of interference with prospective business advantage amounts to an "impermissible alternative state law remedy for inequitable conduct before the PTO." Dow Chem., 139 F.3d at 1476. Allowing this action to proceed would permit an "inappropriate collateral intrusion on the regulatory procedures of the PTO "under the guise of a complaint sounding in tort" and would be "contrary to Congress' preemptive regulation in the area of patent law." Abbott Labs. v. Brennan, 952 F.2d 1346, 1357 (Fed. Cir. 1991) (citations omitted). Accordingly, federal patent law preempts CardioVention's Count III claim, because the claim does not allege any actionable conduct other than conduct before the PTO. As the allegations are coextensive with patent law, they are preempted by patent law. See SemiConductor Energy Lab. Co., Ltd. v. Samsung Elecs. Co. Ltd., 204 F.3d 1368, 1382 (Fed. Cir. 2000) (affirming dismissal of state RICO counterclaims that "occupy a field identical in scope with the inequitable conduct defense"); In re Ciprofloxacin Hydrochloride Antitrust Litig., 363 F. Supp. 2d 514, 543 (E.D.N.Y.

2005) (holding that state law unfair competition law claim based on actions before the PTO was preempted by federal patent law).

The Court notes that federal patent law provides multiple remedies for the conduct complained of by CardioVention. Congress has provided myriad means by which plaintiffs may seek invalidation of patents, either as a defense to an infringement action, or through the "reexamination" process. See 28 U.S.C. §§ 2201-02; 35 U.S.C. §§ 282, 302-07.

Accordingly, based upon the files, records, and proceedings herein, **IT IS HEREBY ORDERED** that:

> Defendant Medtronic, Inc.'s Motion for Partial Summary Judgment [Docket No. 167] is **GRANTED**: Count III, Tortious Interference with Prospective Business Advantage, and Count IV, Negligent Interference with Business Relations, are **DISMISSED**.

Dated: April 24, 2006

s / Michael J. Davis
Judge Michael J. Davis
United States District Court